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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,682	02/20/2004	Harvey A. Restaino	C382.12-0146	6991
27367	7590	11/28/2006	EXAMINER	
WESTMAN CHAMPLIN & KELLY, P.A. SUITE 1400 900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402-3319			BERHANU, SAMUEL	
			ART UNIT	PAPER NUMBER
			2838	

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,682

Applicant(s)

RESTAINO ET AL.

Examiner

Samuel Berhanu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

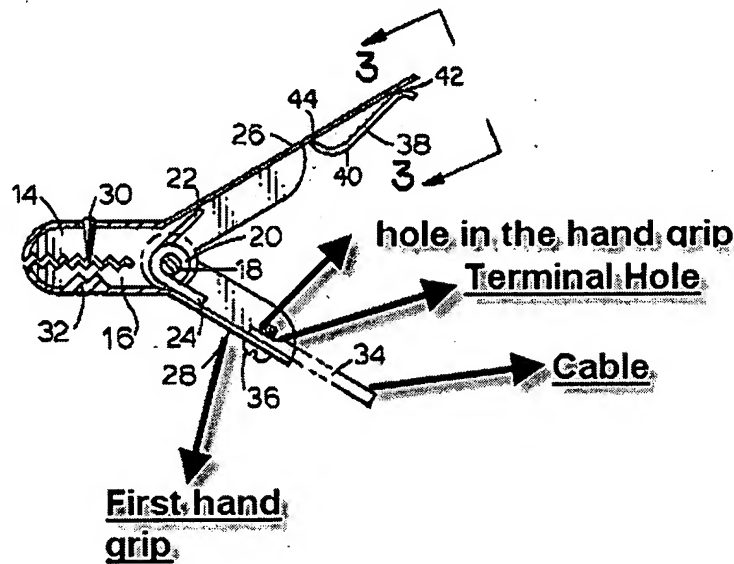
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 3,267,452) in view of Polizzano (US 4,057,313).

Regarding claims 1 and 18, Wolf discloses in Figures 1-10, a cable (20); a first elongate clamp member having a first jaw end (15) and a first hand grip end (11) separated by a first pivot coupling (12), the first elongate clamp member having a conductive piece (22) coupled to the first jaw (15) end (the metal end of element 15 is in electrical connection with the conductive wire of the handle) for making contact with a contact of the battery and the first hand grip having a first hole formed therein; a second elongate clamp member having a second jaw end (13) and a second hand grip end (10) separated by a second pivot coupling (12) (noted that both the jaws and the hand grips separated by pivot point), the second elongate clamp member pivotally joined to the first elongate clamp member by the first and second pivot couplings (12) whereby the first and second jaws are generally aligned together; Wolf does not disclose explicitly the first hand grip having a first hole formed therein and a terminal electrically coupled to the cable having a terminal hole formed therein aligned with the first

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hole in the first hand grip; and a removable fastener which couples the terminal to the first hand grip through the first hole and the terminal hole whereby the first hand grip can be disconnected from the cable. However, Polizzano discloses in Figures 1-2



the first hand grip (28) having a first hole (the rivet 36 passes through the hole of the clamp) a terminal (the end portion of cable 34) electrically coupled to the cable (348) having a terminal hole (the pivot fastened position on the cable) formed therein aligned with the first hole in the first hand grip; and a removable fastener (36) which couples the terminal to the first hand grip through the first hole and the terminal hole whereby the first hand grip can be disconnected from the cable. It would have been obvious to a person having ordinary skill in the art at the time of the invention to substitute Wolf's clamp assembly and secure the

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cable in the handle portion with a removable fastener means as taught by Polizzano in order to ensure a reliable secure mechanical and electrical connection between the cable and the clamp handle.

3. Claims 3-4 and 7-8, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 3,267,452) in view of Polizzano (US 4,057,313), and further in view of Kowalski et al. (US 5,772,468).

Regarding Claims 3 and 22, neither Wolf nor Pizzano discloses explicitly, the cable includes a main electrical connector electrically coupled to the terminal and capable of carrying a high current. Kowalski et al. disclose, the cable (48) includes a main electrical connector electrically coupled to the terminal and capable of carrying a high current (Column 5, lines 66-67). It would have been obvious to a person having ordinary skill in the art at the time of the invention to substitute Wolf's cable with a high current carrying cable as taught by Kowalski et. al. in order to avoid power loss on the wire due to heat.

Regarding Claim 4, Kowalski et al. disclose, the high current comprises a charging current configured to charge the battery (Column 2, lines 27-30)

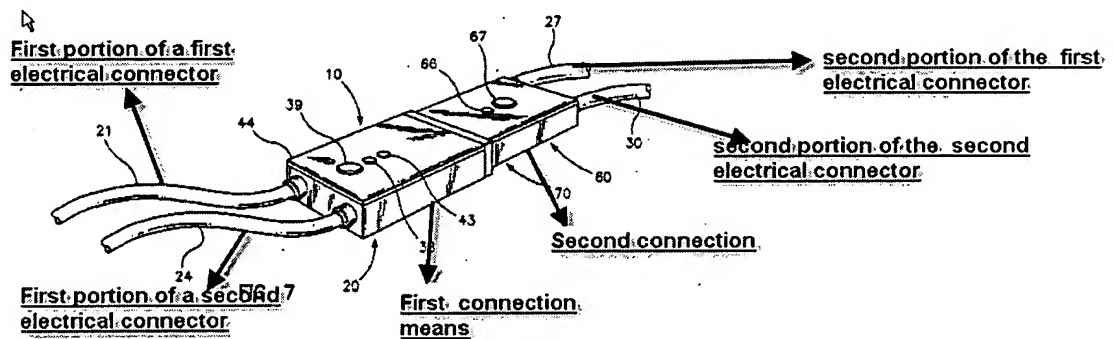
Regarding Claim 7, Kowalski et al. disclose in Figure 3 a spring (26) coupled to the first and second elongate clamp members configured to urge the first and second jaws together to a closed position (Column 4, lines 40-43).

Regarding Claim 8, Kowalski et al. disclose, the first hand grip and the second hand grip are covered with an insulating material (Column 2, lines 59-67).

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4. Claims 2 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 3,267,452) and Polizzano (US 4,057,313), as applied to Claim 1 above, and further in view of Johnson (4,969,834) and in view of Moenkhaus et. al. (US 6,500,025) .

Regarding Claims 2 and 19, neither Wolf nor Polizzano discloses the apparatus including a first electrical plug electrically coupled to the clamp and a second electrical plug electrically coupled to the cable, the first and second plugs configured to removably electrically couple together. However, Johnson discloses in Figure 4



the apparatus including a first electrical plug (connection 20) electrically coupled to the clamp and a second electrical plug (83) electrically coupled to the cable, the first and second plugs configured to removably electrically couple together (Column 4, lines 66-68, Column 5, lines 1-8). It would have been

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obvious to a person having ordinary skill in the art at the time of the invention to modify Wolf's clamp assembly and add a plug as taught by Johnson in order to provide reliable connection between the cable and the clamp. Johnson does not disclose explicitly, the connection means is a plug. Moenkhaus et. al. disclose that a plug can be used as a cable connection means (see abstract and Figure 6). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use a plug as connecting means as taught by Moenkhaus et. al. in Wolf's clamp assembly in order to provide series or parallel cable connections

Regarding Claim 20, Johnson discloses, in Figures 4 and 8 wherein removably connecting the first and second electrical plugs (20,83) comprises: electrically connecting a first portion of a first electrical connector from the first plug to the clamp and connecting a second portion of the first electrical connector from the second plug to the cable; and electrically connecting a first portion of a second electrical connector from the second plug to the clamp and connecting a second portion of the second electrical connector from the second plug to the cable.

5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 3,267,452) and Polizzano (US 4,057,313), as applied to Claim 1 above, and further in view of Vonderhaar et al. (US 6,469,511).

Regarding Claim 5, neither Wolf nor Polizzano disclose the cable includes a first electrical connector and a second electrical connector, wherein at least

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one of the first connector and the second connector provides a Kelvin connection capable of injecting a forcing function into the battery and measuring a voltage across the battery. However, Vonderhaar et al. disclose in Figures 7 and 8 the cable includes a first electrical connector (720) and a second electrical connector (722), wherein at least one of the first connector and the second connector provides a Kelvin connection capable of injecting a forcing function into the battery and measuring a voltage across the battery (Column 5, lines 1-26). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a voltage monitoring means as taught by Vonderhaar et al. in Wolf's. clamp assembly in order to monitor status of a battery.

Regarding Claim 6, Vonderhaar et al. disclose in Figure 7, at least one of the first connector and the second connector provides a sensor lead for sensing a physical property of the battery (720, Column 5, lines 10-15).

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 3,267,452) and Polizzano (US 4,057,313) as applied to Claim 1 above, and further in view of Yoshikawa et. al. (US 4,983,086).

Regarding Claim 9, neither Wolf nor Polizzano discloses explicitly, the terminal comprises a tin-plated ring. However, Yoshikawa discloses in Figure 4 and paragraphs 58, 62 and 66, the terminal comprises a tin-plated ring. It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify Wolf's cable in order to have a thin-plated ring terminal as taught by Youshikawa in order to provide a hole as a securing means for the cable.

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7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 3,267,452) and Polizzano (US 4,057,313), as applied to Claim 1 above, and further in view of Hatrock (US 4,983,086).

Regarding Claim 10, neither Wolf nor Polizzano discloses the replaceable fastener comprises a nut and bolt. However, Hatrock discloses in Figure 1, the replaceable fastener comprises a nut and bolt. It would have been obvious to use a nut and a bolt fastener means as taught by Hatrock in Wolf's clamp in order to provide securable fastener assembly

8. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 3,267,452) in view of Polizzano (US 4,057,313), and in view of Johnson (4,969,834).

Regarding Claim 11, Wolf and Polizzano disclose the claim invention as claim 1 above, (see rejection above, 35 USC § 103 paragraph 5), except a first electrical plug coupled to the clamp and a second electrical plug coupled to the cable, wherein the first and second electrical plug removably electrically couple together. However, Johnson discloses in Figure 4, a first electrical plug (20) coupled to the clamp and a second electrical plug coupled to the cable (28), wherein the first and second electrical plug removably electrically couple together (Column 4, lines 66-68, Column 5, lines 1-8). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify Wolf's clamp assembly and add a plug for connection means as taught by Johnson in order to provide a reliable electrical connection.

Regarding Claim 12, Johnson discloses, wherein the first plug (20)

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Is electrically coupled to the clamp through a first portion of a first electrical connector (21) and a first portion of a second electrical connector (24).

Regarding Claim 13, Johnson discloses, wherein the second plug is (83) electrically coupled to the cable through a second portion of the first electrical connector (81) and a second portion of the second electrical connector (82).

Regarding Claim 14, Johnson discloses in Figure 4, the first and second portions of the first electrical connector and the first and second portions of the second electrical connector are configured to removably electrically couple together through the first and second plugs (Figure 4).

9. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 3,267,452) and Polizzano (US 4,057,313), and in view of Johnson (4,969,834) as applied to Claim 11 above, and further in view of Vonderhaar et al. (US 6,469,511).

Regarding Claim 15, Wolf, Polizzano and Johnson disclose all of the claim limitation (see rejection above, 35 USC § 103), except one of the first and second electrical connectors includes two electrically isolated electrical contacts that provide a Kelvin connection. However, Vonderhaar et al. disclose in Figures 7 and 8, one of the first and second electrical connectors includes two electrically isolated electrical contacts that provide a Kelvin connection. It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a voltage monitoring means as taught by Vonderhaar et al. in Wolf's assembly cable in order to monitor status of a battery.

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Regarding Claim 16, Vonderhaar et al. disclose in Figure 7, at least one of the first connector and the second connector provides a sensor lead for sensing a physical property of the battery (720, Column 5, lines 10-15).

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 3,267,452) in view of Polizzano (US 4,057,313), and in view of Johnson (4,969,834) as applied to claim 13 above, and further in view of Hatrock (US 4,983,086).

Regarding Claim 17, Wolf, Polizzano (US 4,057,313), and Johnson disclose all of the claim limitations, except the first and second electrical connectors comprise acid-resistant connectors. However, Hatrock disclose, the first and second electrical connectors comprise acid-resistant connectors (Column 5, lines 9-17). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a non-metallic acid resistant material as taught by Hatrock in Wolf's electrical connection in order to improve life of the electrical connection.

11. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 3,267,452) and Polizzano (US 4,057,313), and Johnson (4,969,834) as applied to Claim 19 above, and further in view of Vonderhaar et al. (US 6,469,511).

Regarding Claim 21, Wolf and Polizzano and Johnson disclose all of the claim limitations, except the first electrical connector include two electrically isolated electrical contacts which provide a Kelvin connection and the second electrical connector comprises a sensor lead. However, Vonderhaar et al.

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disclose in Figures 7 and 8 the first electrical connector includes two electrically isolated electrical contacts which provide a Kelvin connection and the second electrical connector comprises a sensor lead (720, Column 5, lines 10-15). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a voltage monitoring means as taught by Vonderhaar et al. in wolf's clamp assembly in order to monitor status of a batter

Response to Arguments

12. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

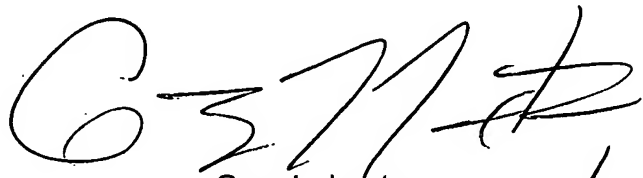
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel Berhanu whose telephone number is 571-272-8430. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gary L. Laxton
Primary Examiner
Art Unit 2838

11/22/2006

SB